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ABSTRACT

Legislation such as the Americans with Disabilities Act mandates testing accommodations in order to ensure that examinations accurately reflect the abilities of a person. This document describes different types of testing for hearing impaired and visually impaired. Individualized testing accommodations such as changes to the test directions, administration procedures, or test contents; audio taped examinations; and the use of interpreters are explained. Issues regarding whether or not modified tests are equivalent to standard tests are presented with a focus on the low reading levels of most people with hearing impairment. Legal issues are explained such as inclusion of students with disabilities in national testing programs and voluntary disclosure of a disability. Testing professionals have the responsibility to become informed about disabilities and to correct any misconceptions they hold about the capabilities of individuals with disabilities. (Contains 19 references.) (JDM)

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Equity Issues in the Assessment of Individuals With Visual or Hearing Impairments

By
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2

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Chapter Eleven

Equity Issues in the Assessment of Individuals With Visual or Hearing Impairments

Ruth B. Ekstrom[1]

Abstract

Legislation such as the Americans With Disabilities Act mandates testing accommodations, both in the manner of presentation of the examination and in access to the testing site, in order to ensure the examination accurately reflects the abilities of a person with a disability. Individualized testing accommodations and test aids are described, including changes to the test directions, administration procedures, test content, or means of response, audio-taped examinations, or interpreters. Issues regarding whether modified tests are equivalent to standard tests are presented, focusing specifically on the low reading levels of most people with hearing impairment. Finally, legal issues, such as the inclusion of students with disabilities in national testing programs and voluntary disclosure of a disability are explained.

Providing equitable assessment of individuals with visual or hearing impairments, whether for rehabilitation, education, employment, clinical, or counseling purposes, presents a number of challenges. First of all, it is critical that the assessment reflect the abilities of the individual, not the disability. This is may be done through the use of tests specifically designed for people with disabilities. Alternatively, test accommodations or modifications may be made to standardized tests. It is important to note, however, that not all individuals with disabilities require special tests or testing accommodations.

Tests designed specifically for assessing individuals who are blind or visually impaired include cognitive instruments, such as the Blind Learning Aptitude Test, and developmental rating scales, such as the Maxfield-Buchholz Social Maturity Scale for Blind Pre-School

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Children. But only a small proportion of the tests most commonly used with blind and partially sighted individuals were developed for this population (Swallow, 1981). Even when tests have standardization specific to visually impaired individuals, this may be based on unreplicated norms from small, possibly biased samples (such as students in residential institutions for the blind) or may be based on a non-homogeneous sample of individuals with various types and degrees of visual impairment (Simeonsson, 1986). Similar instruments, with similar problems, exist for individuals with hearing impairment.

Providing testing accommodations for individuals with disabilities is nothing new; in 1937 the College Board developed a version of the SAT for visually impaired students. Today, because of legislation such as the Americans With Disabilities Act (ADA; PL 101-336), much more attention is being given to test accommodations. For example, ADA says:

> Any private entity that offers examinations or courses related to applications, licensing, certification, or credentialing for secondary or postsecondary education, professional, or trade purposes . . . must assure that when the examination is selected and administered to an individual with a disability . . . the examination results accurately reflect the individual's aptitude or achievement level or whatever other factor the examination purports to measure, rather than reflecting the individual's impaired sensory, manual, or speaking skills (except where those skills are the factors that the examination purports to measure).

Testing accommodations for individuals with visual or hearing impairment may involve changes in the test directions and administration procedures, changes in the test content, and changes in test response mechanisms. ADA specifically states that modifications to an examination may include changes in the length of time for completion and adaptation of the manner in which the examination is given. Provision of appropriate auxiliary aids is also required under ADA, "unless offering a particular auxiliary aid would fundamentally alter the measurement of the skills or knowledge the examination is intended to test or would result in an undue burden."

Test aids and services mentioned in ADA include "taped examinations, interpreters or other means of making orally delivered materials available to individuals with hearing impairments, Braille or large-print examinations and answer sheets or qualified readers for individuals with visual impairments or learning disabilities, transcribers for individuals with manual impairments, and other similar services and actions." Other accommodations for individuals with visual

impairments may include provision of special lighting; magnification devices; tactile maps, diagrams, and graphs; audiocassettes; electronic readers (speech synthesizers); and talking calculators. Individuals with hearing disabilities may use video cassettes, especially those using sign language translations of the test directions or test content. Siskind (1993a) has described the modifications used in statewide testing programs to accommodate pupils with disabilities.

ADA mandates that test accommodations be individualized. Equitable does not mean identical. No single type of test accommodation is adequate or appropriate for all individuals with a given type of visual or hearing impairment. Often more than one type of accommodation is required by an individual test taker. For example, an individual with visual impairment may need both an audio-taped version of the test and a large-type "follow along" script; another test taker may need a Braille version of a test and tactile maps and graphs along with extra time. (The typical Braille reader may require 2 to 2 1/2 times as long to read material as would a sighted individual, but this time frame may vary considerably both because of the nature of the test material and because of the individual's skill in reading Braille.)

Sometimes the content of a test must be changed. Such adaptations might include, for hearing impaired individuals, dropping the listening comprehension part of a foreign language test. The question then arises as to whether or not the test modification is appropriate. It is very important to consider the construct being measured and to determine whether the testing accommodation or modification alters that construct. For example, a student using a large-print version of a reading comprehension test is still reading, but a student using an audiocassette version of the test is displaying skills in listening comprehension, not reading comprehension.

The rationale for the testing accommodation or modification must be carefully considered. When testing individuals with visual impairment, the report from a functional visual assessment can provide important information in this regard. Such assessments describe how the individuals use their vision. (It is important to remember that more than 75% of individuals classified as legally blind have some usable vision.) This report may indicate the type of lighting needed to optimize use of vision, the most appropriate type size, the best posture for individuals with a limited field of vision, optimum distance for viewing material, and recommendations for using low-vision equipment. If you are doing assessments for rehabilitation or educational planning, or for clinical purposes, this information is critical, and you should request it prior to carrying out any testing. If you are testing individuals for admissions or employment, however, the law prohibits your making an inquiry about the existence of a disability prior to making the

admissions decision or job offer. This is confusing to many people. I want to emphasize that you should know the purpose of testing before you make an inquiry about a disability.

If you are working with teachers or special educators on assessments that are part of mandatory state testing programs for all students, be sure that you and they know the testing accommodations and modifications that are allowed. One study (Siskind, 1993b) found that "neither special or regular educators are well informed about this topic." I have special concerns about the validity of test scores when a student with a disability is not able to use a test accommodation that she or he is familiar with and that has been requested.

Most of the research on test accommodations shows that the modified tests are comparable to the standardized versions. The studies in the book *Testing Handicapped People* (Willingham et al., 1988) compared test results based on such measures as reliability, validity, factor structure, and prediction of academic performance. In general, comparability between nonstandard and standard test administrations was high. But both this research and other research done at ACT (Laing and Farmer, 1984) suggest that the prediction of grades for students with physical disabilities is somewhat less accurate than for other students. It should also be pointed out, however, that the Educational Testing Service studies showed that visually impaired students performed slightly better than expected.

Modified tests may not always be equivalent to standard forms. For example, an audio-taped version of a test places much more emphasis on memory skills than does a print version. Certain mathematical item types tend to present more difficulties for students using the Braille version of tests, especially when the items contain graphical material or where spatial estimation can be helpful in eliminating options. Charts, graphs, and diagrams also may present special problems for test takers who are visually impaired.

For individuals with severe hearing impairments, use of any verbal test may be problematic due to their limited English language skills (Gordon, Stump, and Glaser, 1996). In this country, deaf individuals and those with severe hearing impairments, especially those whose hearing loss occurred before they acquired speech, often communicate using American Sign Language (ASL)—which has a different grammar and syntax than English—and learn English as a second language. For this reason, some individuals have argued that instruments such as the Test of English as a Second Language (TOEFL) might be more appropriate for assessing the verbal skills of deaf students than an instrument such as the SAT (Ragosta & Nelson, 1986; Traxler, 1990). The difficulties of assessing individuals with hearing impairments are not limited to tests of verbal ability, however. An interest inventory, a

personality scale, or any other test that requires a sixth- to eighth-grade reading level may be invalid for many individuals in this population. The mean reading level for people with hearing impairment has been estimated at the third- to fourth-grade level (Schmelter-Davis, 1984). Individuals who experience hearing loss in their adult years may try to rely on lip reading, but even skilled lip readers understand only about 25% of what is being said (Vernon & Andrews, 1990). Because hearing impairments, unlike most other physical disabilities, are invisible to others, test administrators may have difficulty in determining whether the test taker understands what is being said.

Remember that some individuals with visual and hearing impairments may try to conceal them. (See, for example, the book *Planet of the Blind* by Stephen Kuusisto, in which the author describes how he tried for nearly four decades to hide the fact that he was legally blind.) Blind individuals often develop exceptional memory skills, particularly to help themselves with orientation and mobility. Test data shows that students who are blind tend to have better short-term memory skills than the general population. Individuals with hearing impairment may also try to conceal their disability. It has been estimated that it takes an average of seven years for someone with a hearing impairment to seek help and that one out of every seven individuals with a hearing impairment never seeks help.

In addition to making appropriate and individualized testing accommodations, equity requires that the testing site be accessible to individuals with disabilities. ADA requires that examinations be offered "in a place and manner accessible to persons with disabilities" or that alternative arrangements be made. Alternative arrangements mentioned in ADA include "provision of an examination in an individual's home with a proctor if accessible facilities or equipment are unavailable." One good source of information about administering tests to individuals with disabilities is *Guide for Administering Written Employment Examinations to Persons with Disabilities* (Eyde, Nestor, Heaton, & Nelson, 1994). It is important to provide a testing site that is free of obstacles and, for individuals with visual impairment, to orient the test taker to the test room. Test takers should be informed in advance about any aids that will be used and be told whether they may bring any aids with them. Orientation to the aids used in the testing situation may be necessary, even if the test taker uses similar aids at home, in school, or in the workplace.

Access to state and national testing programs has been a special concern for students with disabilities. The Individuals With Disabilities Education Act of 1991 requires that most students with disabilities be included in district, state, and national assessments. Despite this requirement, many of these students have been excluded from such

programs. For example, in 1994, the National Assessment of Educational Progress (NAEP) included only 50% of grade 4 students, 38% of grade 8 students, and 36% of grade 12 students who were identified as having an Individualized Educational Plan. (These plans are required for students with disabilities who demonstrate a need for special education and services.) Under the new procedures, students with an IEP will be included unless the IEP team determines that the student cannot participate or the student's cognitive functioning is so severely impaired that she or he cannot participate, even with accommodations (Olson and Goldstein, 1996). As has been pointed out by staff at the National Center on Educational Outcomes, exclusion of students with disabilities from state and national testing programs limits our ability to obtain policy-relevant information on educational outcomes for this population and perpetuates the myth of inherent differences (McGrew, Thurlow, Shriner & Spiegel, 1992).

In competitive situations such as admissions and employment, equity demands that applicants not be asked to reveal possibly prejudicial information about the existence of a disability prior to receiving the admission or job offer. Section 504 of the Rehabilitation Act of 1973 prohibits test score recipients from making preadmission inquiries as to whether or not an applicant has a disability. Applicants can be "invited" to reveal a disability, but they must be told that the information is being requested on a voluntary basis and will be kept confidential. This legal requirement raises serious problems, especially with nationally standardized admission tests. Many test score recipients feel a need to know whether a test was given under nonstandard conditions and, thus, may be less valid. Currently, the U.S. Office of Education Office of Civil Rights (OCR) has an "interim" policy that postsecondary institutions may use test scores that indicate the test was taken under nonstandard conditions if the test score is not the only criterion for admission and the individual is not denied admission because she or he took the test under nonstandard conditions.

Finally, it is critical that test administrators and test interpreters do not hold biased or stereotyped views about individuals with disabilities. Testing professionals have the responsibility to become informed about disabilities and to correct any misconceptions they hold about the capabilities of individuals with disabilities. The emerging field of disability studies (see the *Chronicle of Higher Education*. January 23, 1998) is providing a body of literature with valuable insights into disability experiences.

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